

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

<b>HUAWEI TECHNOLOGIES CO. LTD.,</b>  <b>Plaintiff,</b>  <b>v.</b>  <b>T-MOBILE US, INC. and</b> <b>T-MOBILE USA, INC.,</b>  <b>Defendants.</b>	<b>Civil Action No. _____</b>  <b>JURY TRIAL DEMANDED</b>
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**ORIGINAL COMPLAINT FOR PATENT INFRINGEMENT**

1. Plaintiff Huawei Technologies Co. Ltd. (“Huawei”) files this Original Complaint for Patent Infringement against T-Mobile US, Inc. and T-Mobile USA, Inc. (collectively “T-Mobile” or “Defendant”) and alleges as follows:

**NATURE OF ACTION**

2. Founded in 1987, Huawei is a global leader of information and communication technology (“ICT”) solutions. Continuously innovating to meet customer need, Huawei is committed to enhancing customer experience and creating maximum value for telecommunications carriers, enterprises, and consumers. Huawei’s telecom network equipment, IT products and solutions, and smart devices, such as telepresence products, transport and core network equipment, fixed and radio access products, and fiber infrastructure products, are deployed and used in 170 countries and regions and serve over one-third of the world’s population. In the fiscal year 2014, Huawei achieved \$46.5 billion in sales revenue. With its annual sales revenue, Huawei was ranked 228 in the Global Fortune 500 in 2015.

3. Huawei is also a leader in research, innovation, and implementation of future networks. Huawei currently has over 170,000 employees globally. Among them, over 76,000 work in its R&D Departments, comprising over 45% of Huawei's workforce. More than 45% of those researchers have Master's degrees, and over 1,600 of Huawei's researchers have Doctorate degrees.

4. Indeed, R&D has always been at the core of Huawei's business. Although Huawei started its business reselling third party telecommunication products, it was decided in Huawei's early years that the company must shift its focus to expand its own R&D to develop its own products. Since then, Huawei has heavily invested in R&D and routinely spends no less than 10% of its annual revenue on innovation. In 2014 alone, Huawei invested \$6.6 billion (14.2% of its total 2014 revenue) in R&D. Over the past decade, Huawei has invested nearly \$30.7 billion in R&D in total. Huawei's R&D efforts are focused on addressing current customer needs, as well as long-term technology research and standardization. In pursuit of these goals, Huawei has assembled a global team with thousands of scientists and top engineers in the United States, Europe, and Japan, to staff its first-class R&D department. Globally, Huawei has 16 R&D centers in the United States, Germany, Sweden, France, Italy, Russia, India, and China. Huawei, through its subsidiaries, invests a significant portion of its U.S. revenue into local R&D. By 2014, Huawei's R&D investment in the U.S. reached approximately \$1.1 billion. Huawei's innovations are central to important cutting-edge technologies, including ultra-broadband solutions, such as 100G super-fast data transmission, and LTE and WiMAX wireless networks.

5. As a result of Huawei's substantial dedication to R&D in the telecommunications industry over the past three decades, Huawei has witnessed and contributed to the evolution of

telecommunication networks from the Wire Link Age, into the Wireless Age, and the development from 2G to 3G to 4G, with current progress toward 5G. Over the course of this evolution, Huawei has been responsible for several of the industry's notable achievements and milestones.

6. In the Wire Link Age, due to its heavy investment in R&D in its early years, in 1993 Huawei successfully launched a new line of fixed network switch products, the centerpiece of which was the C&C 08 switching product, which proved to be a tremendous success in rural areas of China, with a rapid coverage of over 300 regional networks.

7. Entering the Wireless Age, as early as 1997, Huawei launched the first-ever GSM infrastructure products engineered solely by a Chinese company. Three years later, Huawei's revenue had reached \$1.9 billion, \$100 million of which was from overseas sales. Along with great market success, Huawei has always been significantly ahead of its competitors in bringing major innovations in cellular technology to market. Shortly after its success with distributed base stations, recognized as customer-centric innovations, Huawei was the first infrastructure supplier to launch the unique SingleRAN technology in 2008, which is now the industry norm. The SingleRAN solution supports GSM, universal mobile telecommunications system ("UMTS"), code division multiple access ("CDMA"), WiMAX, and LTE, i.e., all relevant 2G, 3G, and 4G standards, all in a common platform. In 2009, Huawei deployed the world's first commercial 4G LTE network in Oslo, Norway, sharing the first commercial 4G LTE network with Ericsson in TeliaSonera. In 2010, Huawei achieved the world's fastest LTE-A downlink speed, up to 1.2 Gbps at CTIA Wireless 2010 in Las Vegas, Nevada, and successfully demonstrated simultaneous voice calling and high definition video streaming over LTE and LTE-A networks for Cox Communications, the third-largest cable provider in the United

States. These and other accomplishments earned Huawei the awards for “Best Contribution to R&D for LTE” and “Best Contribution to LTE Standards” at the LTE North America Awards in 2011. At the LTE World Summit, Huawei won numerous awards, such as the “Best LTE traffic management product” and “Innovation in HetNet development” awards in 2014, and the “Best NFV Innovation of the Year” and “Biggest Contribution to 5G Development” awards in 2015. Huawei was the only company that won two awards in both years. Huawei also won the “Most innovative service launch enabled by IMS” with its “Convergent Conference” solution at the 2012 IMS World Forum, the “Best Integrated IMS Solution” award at the 2013 IMS World Forum, and the “Best VoLTE Product” for its end-to-end (E2E) voice and video over LTE (V2oLTE) solution and “Most Innovative Virtualised IMS Solution” for its Cloud IMS solution at the 2014 IMS World Forum in Barcelona, Spain. Among other awards, Huawei was ranked the fifth most innovative company in the entire world by Fast Company in 2010, and one of the World’s 50 Most Innovative Firms by BCG in 2015.

8. During the past 20 years, Huawei has endeavored to drive the mobile industry forward through collaborations on commercialization, innovation, and standardization. According to Current Analysis, Huawei is the clear overall leader due to the strength of its 3GPP wireless communication portfolio, offering a broad variety of network solution options including high- and low-capacity offerings and a range of power output levels and architectures.

9. Huawei actively participates and drives core network-related standards in eminent organizations, such as 3GPP, IETF, ITU-T, GSMA, ETSI, CCSA, IMTC, SIP Forum, MSF, NGMN, OMA, 3GPP2, etc. *See, e.g.,* <http://webapp.etsi.org/3gppmembership/Results.asp?Member=ATIS&Member=ETSI>. By the end of 2014, Huawei was a member of approximately 170 Standard Setting Organizations

(“SSOs”). More than 2,930 contributions submitted by Huawei were approved by these organizations. In addition, Huawei has obtained 76 leadership positions in these core network technology related SSOs, such as chairs, rapporteurs, and editors.

10. Huawei’s commitment to innovation is a major reason why it holds one of the largest patent portfolios in the world. As a result of Huawei’s significant investment in R&D, Huawei presently holds over 41,000 issued patents, broadly covering the major jurisdictions of the world. Huawei has over 24,000 granted patents in China and has been the No. 1 patent owner and applicant in China for many years. Huawei also routinely applies for 4,000 to 5,000 patents globally each year. In 2014, Huawei and its affiliated companies obtained 1,155 patents issued by the United States Patent & Trademark Office, the 28<sup>th</sup> most of any company. That same year, Huawei obtained 503 issued patents from the European Patent Office, the 7<sup>th</sup> most of any company. Huawei’s growing patent portfolio is the natural result of its significant investments in R&D and contributions to the ICT industry. Recently, the World Intellectual Property Organization (WIPO) ranked Huawei as No. 1 for international patent applications across all industries. Huawei’s significant efforts in R&D demonstrate the value that Huawei places on innovation, and on sharing its efforts with the public, in return for a limited right to exclusive use of its inventions.

11. With the rapid pace of technical innovation in telecommunications, different types of telecommunication technologies are in use simultaneously in the same air interface. For example, 4G LTE and Wi-Fi are often in use at the same time, with 4G LTE being used for broad range coverage, and Wi-Fi being used for short distances and high-speed access. But no matter which access technology is in use, consumers want to enjoy the convenience of hearing and talking to each other regardless of the physical distances from each other and regardless of

the physical location where each speaker is located. Indeed, today's consumer has come to expect that any communications device will work at any time, in all locations. To meet this growing demand, VoWiFi (Voice over Wi-Fi) and VoLTE (Voice over LTE) have been developed. These technologies were designed to eliminate coverage limitations in older technologies. As a result, it has become very important for technology developers and network operators to create systems that allow subscribers to take advantage of these newer technologies by supporting handover between networks. For example, network operators are now expected to provide for seamless and reliable handover of a call initiated on a 4G LTE network to a Wi-Fi network where the call will continue without interruption to the parties on the call.

12. Huawei, as a telecommunication technologies developer and industry leader, due to its continuous investments in technologies research, holds multiple patents related to features for ensuring or improving the reliability of wireless networks. These features include, for example, handling interruptions in wireless service with a minimum of interruption for the end users of such services, such as by recovering one-tunnel connections. Further, such features aid wireless network providers in supporting network disaster and fault tolerance techniques.

13. As detailed below, T-Mobile has used and is using Huawei's patented technology without license.

14. T-Mobile operates wireless networks across the country. T-Mobile's wireless networks include those branded as MetroPCS. Specifically, T-Mobile's 2014 Annual Report notes, "T-Mobile US, Inc. was formed in 2013 through the business combination between T-Mobile USA and MetroPCS Communications, Inc. ('MetroPCS')." T-Mobile 2014 Annual Report, pg. 4 (available at

<http://www.sec.gov/Archives/edgar/data/1283699/000128369915000010/tmus12312014form10-k.htm>).

15. T-Mobile has grown and continues to grow its wireless networks despite not having a license to Huawei's patents that enable the networks. For example, T-Mobile admits that:

We have substantially completed the process of upgrading our network to LTE, which provides our customers with the fastest nationwide LTE services. Our LTE network covered 265 million people as of December 31, 2014, compared to more than 200 million people as of December 31, 2013. This surpassed our year-end goal of covering 250 million people with the fastest nationwide LTE network. We are targeting 300 million people with LTE by the end of 2015.

*Id.* at p. 5. This unlicensed expansion includes the MetroPCS brand:

As part of the integration following the business combination, we are in the process of decommissioning the MetroPCS CDMA network and redundant cell sites, while also integrating select MetroPCS assets in certain metropolitan areas into the overall network. We have moved more than 70% of the MetroPCS spectrum licenses onto the T-Mobile network to provide faster LTE performance in many key markets. Upon completion of the migration of the MetroPCS customer base, we expect to have approximately 61,000 equivalent cell sites, including macro sites and certain distributed antenna system ("DAS") network nodes from the MetroPCS network.

*Id.* at p. 8.

16. T-Mobile, including through its affiliates, is a member of various SSOs that promulgate specifications and standards. For example, T-Mobile, including through its affiliates, is a 3GPP member organization and has knowledge of ETSI specifications promulgated by 3GPP. *See, e.g.,*

<http://webapp.etsi.org/3gppmembership/Results.asp?Member=ATIS&Member=ETSI>.

17. T-Mobile's 2G, 3G, evolved 2G/3G, and 4G LTE wireless networks ("Infringing Wireless Networks") are used by customers in the United States to place cellular phone calls, in addition to being used to send and receive data services, which are offered by—or on behalf of—

T-Mobile. T-Mobile promotes and advertises the use of its services, including its Infringing Wireless Networks, which are available to users in this District, and throughout the United States. (*See, e.g.*, <http://www.t-mobile.com/coverage.html>). Indeed, T-Mobile proclaims that “T-Mobile is the fastest growing wireless company in the U.S., based on customer growth in 2014, currently providing wireless communications services, including voice, messaging and data, to over 55 million customers in the postpaid, prepaid, and wholesale markets” and “this means offering customers a great service on a nationwide 4G Long-Term Evolution (‘LTE’) network, devices when and how they want them, and plans that are simple, affordable and without unnecessary restrictions.” 2014 Annual Report, p. 3.

18. Access to T-Mobile’s Infringing Wireless Networks is offered by T-Mobile in accordance with various “rate plans” by which T-Mobile sets the price that its users pay for accessing the Infringing Wireless Networks. T-Mobile offers these “rate plans” through, for example, T-Mobile stores and websites. When purchased from T-Mobile, on information and belief, such “rate plans” authorize third parties, such as customers and users, to access T-Mobile’s Infringing Wireless Networks. *See, e.g.*, <http://www.t-mobile.com/cell-phone-plans.html>; <http://www.t-mobile.com/cell-phone-plans/mobile-internet.html>. According to T-Mobile, a “customer is generally defined as a SIM card with a unique T-Mobile identity number which is associated with an account that generates revenue. Branded customers generally include customers that are qualified either for postpaid service, where they generally pay after incurring service, or prepaid service, where they generally pay in advance. Wholesale customers include M2M and MVNO customers that operate on our network, but are managed by wholesale partners.” T-Mobile 2014 Annual Report, pg. 31.



19. According to T-Mobile, the Infringing Wireless Networks benefit T-Mobile's business and customers. *See id.* at 6 ("The success of our Un-carrier proposition and continued modernization of the network has further repositioned T-Mobile as a provider of dependable high-speed LTE service with a full range of desirable devices and provides our customers with an unrivaled customer experience."). Furthermore, T-Mobile realizes further example benefits through network license fees to other operators. *See id.* at 27 ("Other revenues increased \$81 million, or 25%, in 2014, compared to 2013. The increase was primarily due to higher co-location rental income from leasing space on wireless communication towers to third parties and higher lease income associated with spectrum license lease agreements resulting from spectrum swap transactions.")

20. On information and belief, T-Mobile sells and offers for sale mobile devices, service plans, and/or SIM cards configured to access its Infringing Wireless Networks to place and receive voice calls and to send and receive data. On information and belief, T-Mobile uses Huawei's patented features to ensure the reliability of its Infringing Wireless Networks in violation of Huawei's patent rights. For example, T-Mobile specifically advertises it "maintain[s] three geo-redundant Network Operations Centers (NOCs) spread across the country that monitor [its] network 24 hours a day to ensure a quick response to outages and emergency situations." *See* <https://newsroom.t-mobile.com/news-t-mobile-takes-action-to-prepare-for-hurricane-irene.htm>.

21. Based on information and belief, T-Mobile makes, uses, operates, and/or sells access to wireless networks in the United States, including its Infringing Wireless Networks, that directly infringe one or more claims of the patents asserted herein. For example, these wireless networks utilize network components, such as SGWs, HSSs, MMEs, SGSNs, CSCFs, RNCs,

GGSNs, Packet Data Network Gateways (“PDN-GWs”), and eNodeBs, etc., and interfaces there between, which infringe one or more claims of the asserted patents, by, for example, making, using, and/or selling a wireless network configured to handle interruptions in wireless service.

22. Additionally, T-Mobile makes, uses, sells, offers for sale, and/or imports into the United States, service plans, mobile phones, and/or SIM cards that contribute to the infringement of one or more claims of the asserted patents when used by customers and other users to put the Infringing Wireless Networks into use for their benefit. For example, T-Mobile – or those on its behalf – sells service plans, mobile phones, and/or SIM cards specifically configured to access and make use of T-Mobile’s Infringing Wireless Networks, including for example, to make use of the network’s features for handling interruptions in wireless service. The service plans, mobile phones and/or SIM cards are offered for sale and sold to customers in the United States by T-Mobile (or an authorized reseller), including through its website and various storefronts, and when used as instructed by T-Mobile, access and use T-Mobile’s Infringing Wireless Networks, including, for example, the reliability and disaster tolerance capabilities of those networks.

23. Such service plans, mobile phones, and/or SIM cards are specifically configured to access and make use of T-Mobile’s Infringing Wireless Networks by T-Mobile or under its authorization, including, for example, access to the network’s capabilities to handle interruptions in wireless service. On information and belief, once configured to access T-Mobile’s Infringing Wireless Networks, such service plans, mobile phones, and/or SIM cards are at least material components that do not have any substantial uses other than to access T-Mobile’s Infringing Wireless Networks. On information and belief, T-Mobile knows such service plans, mobile devices, and/or SIM cards to be especially made or especially adapted for infringement of the

patents asserted herein, and not staple articles or commodities of commerce suitable for substantial noninfringing use.

24. Furthermore, based on information and belief, T-Mobile induces infringement by others of one or more claims of the patents asserted herein. For example, T-Mobile takes active steps to promote and encourage the use of its Infringing Wireless Networks and the infringing networking interfaces and components within those networks. On information and belief, T-Mobile is aware of the patents asserted herein, at least as of the filing of this lawsuit, and knows or should have known that the inducing acts described herein constitute infringement of the asserted patents.

25. T-Mobile takes specific steps to actively induce others—such as, for example customers and operators—to access and use its Infringing Wireless Networks. For example, and without limitation, on information and belief, T-Mobile actively induces direct infringement of one or more claims of the asserted patents, by others, by promoting, instructing, offering, and encouraging others to use mobile devices, service plans and/or SIM cards configured to access its Infringing Wireless Networks capable of handling interruptions in wireless service. Furthermore, T-Mobile also actively promotes the use of the reliability and disaster tolerance features of its Infringing Wireless Networks, including for example and without limitation, by way of T-Mobile storefronts, authorized resellers, customer service and sales representatives, and/or its internet sales website. Such active promotion includes advertising its Infringing Wireless Networks, and offering SIM cards, service plans, and/or mobile devices that are used to access T-Mobile's Infringing Wireless Networks and allow use of the reliability and disaster tolerance features of those networks. And, on information and belief, T-Mobile knows or should know that such sales and promotions actively induce others to directly infringe one or more

claims of the asserted patents, including for example, by prompting them to use the mobile devices, service plans and/or SIM cards to access T-Mobile's Infringing Wireless Networks.

26. As another example, T-Mobile provides and/or authorizes the providing of instruction manuals, product manuals, and other materials (e.g., with the sale of a product and/or offered on its website) for customers' and other users' mobile devices, service plans, and/or SIM cards that are configured to access T-Mobile's Infringing Wireless Networks, and for example, shows how to make use of the reliability and disaster tolerance features of seamless handover capability provided by those networks. And, on information and belief, T-Mobile knows or should know that such materials and instructions actively induce others to directly infringe one or more claims of the asserted patents, including by instructing them to use the mobile devices, service plans, and/or SIM cards to access T-Mobile's Infringing Wireless Networks.

27. Additionally, T-Mobile and/or its authorized retailers operate T-Mobile stores throughout the United States, including operating T-Mobile stores in this District, such as in Longview, Texas. *See* <http://www.t-mobile.com/store/cell-phone-longview-tx-3333.html>. Each of these stores, on information and belief, sell, promote, and instruct the use of T-Mobile's Wireless Infringing Networks, by for example, selling and/or offering for sale, mobile devices, service plans, and/or SIM cards configured to access T-Mobile's Infringing Wireless Networks so as to allow use of the reliability and disaster tolerance capabilities of those networks.

28. To protect its intellectual property rights (and the interests of other actual or prospective licensees), Huawei contacted T-Mobile on June 6, 2014, to discuss Huawei's Licensing Program. Huawei specifically identified patents from its portfolio and specific services offered by T-Mobile related to Huawei's patents, such as LTE and VoLTE. To continue

discussions, and to provide additional information to T-Mobile regarding the identified patents, Huawei offered that the parties enter into a mutual non-disclosure agreement.

29. On June 23, 2014, T-Mobile refused to sign the mutual non-disclosure agreement and rejected the idea of exchanging information under the mutual non-disclosure agreement.

30. On June 30, 2014, Huawei reiterated to T-Mobile Huawei's need for a mutual non-disclosure agreement to allow Huawei to provide T-Mobile non-public information such as an initial analysis regarding possible infringement of Huawei's patents.

31. On September 3, 2014, T-Mobile responded and continued to refuse to enter into any non-disclosure agreement.

32. To date, T-Mobile has refused to enter into a mutual non-disclosure agreement, and therefore, is unwilling to even open negotiations regarding a license. Such refusals by T-Mobile have made further explanation by Huawei to T-Mobile impossible.

33. At least in view of the foregoing, and upon information and belief, T-Mobile is an unwilling licensee to the asserted patents and is unwilling to enter into good faith negotiations. Because T-Mobile has used and continues to use Huawei's intellectual property without a license, Huawei has no choice but to file an action with this Court to enforce its patent rights.

#### **THE PARTIES**

34. Huawei Technologies Co. Ltd. is a Chinese corporation with its principal place of business at Bantian, Longgang District, Shenzhen, People's Republic of China.

35. Defendant T-Mobile US, Inc. is a Delaware corporation with its principal place of business at 12920 SE 38th Street, Bellevue, Washington 98006. On information and belief, T-Mobile US, Inc. may be served through its registered agent for service, Corporation Service Company, 2711 Centerville Rd Suite 400, Wilmington, Delaware 19808.

36. Defendant T-Mobile USA, Inc. is a Delaware corporation with its principal place of business at 12920 SE 38th Street, Bellevue, Washington 98006, and is a wholly-owned subsidiary of T-Mobile US, Inc. On information and belief, T-Mobile USA, Inc. may be served through its registered agent for service, Corporation Service Company, 211 E. 7th St. Suite 620, Austin, Texas 78701-3218. On information and belief, Defendant T-Mobile USA, Inc. has R&D facilities at 7668 Warren Pkwy, Frisco Bridges Tech Campus, Frisco, Texas 75034. Furthermore, on information and belief, T-Mobile USA, Inc. operates a Network Operations Center (NOC) in Frisco, Texas, that monitors its network 24 hours a day to ensure a quick response to outages and emergencies.

#### **JURISDICTION AND VENUE**

37. This is a civil action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 101 et seq. Jurisdiction is conferred on this Court pursuant to 28 U.S.C. §§ 1331 and 1338(a).

38. The patents-at-issue in this action are U.S. Patent Nos. 8,069,365 (“the ’365 patent”); 8,719,617 (“the ’617 patent”); 8,867,339 (“the ’339 patent”); and 9,235,462 (“the ’462 patent”) (collectively, the “Asserted Patents”).

39. Venue is proper in this judicial district under 28 U.S.C. §§ 1391 and 1400(b). On information and belief, T-Mobile has engaged in activities including: transacting business in this district and purposefully directing its business activities, including the use of Infringing Wireless Networks in this District, and the sale or offer for sale of services and goods to this District to aid, abet, or contribute to the infringement of third parties in this District.

40. The Court has personal jurisdiction over T-Mobile at least because it has continuous business contacts in the State of Texas and in this District. T-Mobile has engaged in

business activities including transacting business in this District and purposefully directing its business activities, including the use of Infringing Wireless Networks in this District, and the sale or offer for sale of services and goods to this District to aid, abet, or contribute to the infringement of third parties in this District. For example, T-Mobile—either directly or through those acting on its behalf—offers its Infringing Wireless Networks in this District, as shown at <http://www.t-mobile.com/coverage.html>. As another example, T-Mobile—either directly or through those acting on its behalf—has stores and/or authorized retailers in this District. See <http://www.t-mobile.com/store-locator.html>.

**COUNT ONE: INFRINGEMENT OF  
U.S. PATENT NO. 8,069,365**

41. Huawei realleges and incorporates by reference Paragraphs 1-40 above, as if fully set forth herein.

42. The USPTO duly and properly issued the '365 patent, entitled "Method and Device for Realizing IP Multimedia Subsystem Disaster Tolerance," on November 29, 2011. The '365 patent was duly assigned to Huawei, which is the assignee of all right, title, and interest in and to the '365 patent and possesses the exclusive right of recovery for past, present, and future infringement. Each and every claim of the '365 patent is valid and enforceable. A true and correct copy of the '365 patent is attached hereto as Exhibit 1.

43. On information and belief, T-Mobile uses Huawei's patented features to ensure the reliability of its Infringing Wireless Networks in violation of Huawei's patent rights. For example, T-Mobile specifically advertises it "maintain[s] three geo-redundant Network Operations Centers (NOCs) spread across the country that monitor [its] network 24 hours a day to ensure a quick response to outages and emergency situations." See <https://newsroom.t-mobile.com/news-t-mobile-takes-action-to-prepare-for-hurricane-irene.htm>.

44. In violation of 35 U.S.C. § 271, T-Mobile has infringed, contributed to the infringement of, and/or induced others to infringe at least one or more claims of the '365 patent by, among other things, making, using, offering for sale, selling, and/or importing into the United States unlicensed systems, products, and/or services in a manner that infringes one or more of at least claims 1, 3, and/or 27 of the '365 patent. Such unlicensed systems, products, and/or services include, by way of example and without limitation, T-Mobile's Infringing Wireless Networks and/or the components thereof that enable reliability and disaster tolerance on its Infringing Wireless Networks. In addition, on information and belief, users of T-Mobile's Infringing Wireless Networks infringe the '365 patent by putting the claimed system into service by, for example, using the components thereof that enable reliability and disaster tolerance on its Infringing Wireless Networks.

45. For example, T-Mobile has directly infringed one or more claims of the '365 patent by i) making, leasing, and/or using its wireless networks; ii) making, offering for sale, and/or selling its services; and iii) making, using, offering for sale, selling, and/or importing into the United States components (such as CSCFs, HSSs etc.) in a manner that infringes at least claims 1, 3, and/or 27 of the '365 patent and by using such components in its networks.

46. On information and belief, T-Mobile has infringed the '365 patent by inducing others, including users of its infringing networks through subscription plans, mobile devices and/or SIM cards that it sells and/or offers, to infringe one or more of at least claims 1, 3, and/or 27 of the '365 patent in violation of 35 U.S.C. § 271(b).

47. On information and belief, T-Mobile takes active steps to induce infringement of one or more of at least claims 1, 3, and/or 27 of the '365 patent by others, including its customers, network users, and authorized resellers, and T-Mobile takes such active steps



knowing that those steps will induce, encourage and facilitate direct infringement by others. Such active steps include, but are not limited to, encouraging, advertising (including by internet websites, television, store displays, print advertisements, etc.), promoting, and instructing others to use and/or how to use the reliability and disaster tolerance capabilities of the Infringing Wireless Networks via its service plans, mobile devices, and/or SIM cards. Such service plans, mobile devices, and/or SIM cards including those made, sold, offered for sale, and/or imported by T-Mobile. Additionally, by example and without limitation, T-Mobile actively induces authorized resellers, including by instructing, promoting, encouraging, providing or selling promotional materials, for use in facilitating sales of its service plans, mobile devices, and/or SIM cards, that allow access to the Infringing Wireless networks, including but not limited to the reliability and disaster tolerance capabilities for the benefit of the respective users. Additionally, specific examples of steps taken in furtherance of its active inducement by others are set forth above in Paragraphs 24-27, which are incorporated by reference.

48. On information and belief, T-Mobile knows or should know that such activities induce others to directly infringe one or more of at least claims 1, 3, and/or 27 of the '365 patent, including for example, by prompting them to use the mobile devices, service plans and/or SIM cards to access T-Mobile's Infringing Wireless Networks and to make use of the reliability and disaster tolerance features of T-Mobile's Infringing Wireless Networks.

49. On information and belief, T-Mobile contributes to the infringement of at least claims 1, 3, and/or 27 of the '365 patent by others, including its customers, network users, and authorized resellers. Acts by T-Mobile that contribute to the infringement of others include, but are not limited to, the sale, offer for sale, and/or import by T-Mobile of service plans, devices and/or SIM cards. Such service plans, mobile devices and/or SIM cards are especially adapted

for use with and/or access to T-Mobile's Infringing Wireless Networks and are not suitable for substantial noninfringing use. On information and belief, T-Mobile knows such service plans, mobile devices and/or SIM cards to be especially adapted for use with its Infringing Wireless Networks, including but not limited to for use with the network's reliability and disaster tolerance capabilities and that such service plans, mobile devices and/or SIM cards are not suitable for substantial noninfringing use.

50. By way of at least this Complaint, T-Mobile knows of the '365 patent and performs acts that it knows, or should know, induce, and/or contribute to the direct infringement of at least claims 1, 3, and/or 27 of the '365 patent by third parties.

51. T-Mobile undertook and continues its infringing actions despite an objectively high likelihood that such activities infringed the '365 patent, which has been duly issued by the USPTO, and is presumed valid. For example, since at least the filing of this action, T-Mobile has been aware of an objectively high likelihood that its actions constituted and continue to constitute infringement of the '365 patent, and that the '365 patent is valid. On information and belief, T-Mobile could not reasonably, subjectively believe that its actions do not constitute infringement of the '365 patent, nor could it reasonably, subjectively believe that the patent is invalid. Despite that knowledge and subjective belief, and the objectively high likelihood that its actions constitute infringement, T-Mobile has continued its infringing activities. As such, T-Mobile willfully infringes the '365 patent.

52. By its actions, T-Mobile has injured Huawei and is liable to Huawei for infringement of the '365 patent pursuant to 35 U.S.C. § 271.

**COUNT TWO: INFRINGEMENT OF  
U.S. PATENT NO. 8,719,617**

53. Huawei realleges and incorporates by reference Paragraphs 1-52 above, as if fully set forth herein.

54. The USPTO duly and properly issued the '617 patent, entitled "Method and Device for Realizing IP Multimedia Subsystem Disaster Tolerance," on May 6, 2014. The '617 patent was duly assigned to Huawei, which is the assignee of all right, title, and interest in and to the '617 patent and possesses the exclusive right of recover for past, present, and future infringement. Each and every claim of the '617 patent is valid and enforceable. A true and correct copy of the '617 patent is attached hereto as Exhibit 2.

55. On information and belief, T-Mobile uses Huawei's patented features to ensure the reliability of its Infringing Wireless Networks in violation of Huawei's patent rights. For example, T-Mobile specifically advertises it "maintain[s] three geo-redundant Network Operations Centers (NOCs) spread across the country that monitor [its] network 24 hours a day to ensure a quick response to outages and emergency situations." *See* <https://newsroom.t-mobile.com/news-t-mobile-takes-action-to-prepare-for-hurricane-irene.htm>.

56. In violation of 35 U.S.C. § 271, T-Mobile has infringed, contributed to the infringement of, and/or induced others to infringe one or more claims of the '617 patent by, among other things, making, using, offering for sale, selling, and/or importing into the United States unlicensed systems, products, and/or services in a manner that infringes one or more of at least claims 1, 4, 5, 7, and/or 10 of the '617 patent. Such unlicensed systems, products, and/or services include, by way of example and without limitation, T-Mobile's Infringing Wireless Networks and/or the components thereof that enable reliability and disaster tolerance on its Infringing Wireless Networks.

57. For example, T-Mobile has directly infringed one or more claims of the '617 patent by i) making, leasing, and/or using its wireless networks; ii) making, offering for sale, and/or selling its services; and iii) making, using, offering for sale, selling, and/or importing into the United States components (such as CSCFs, HSSs, etc.) in a manner that infringes at least claims 1, 4, 5, 7, and/or 10 and by using such components in its networks.

58. On information and belief, T-Mobile has infringed the '617 patent by inducing others, including users of its infringing networks through subscription plans, mobile devices and/or SIM cards that it sells and/or offers, to infringe one or more of at least claims 1, 4, 5, 7, and/or 10 of the '617 patent in violation of 35 U.S.C. § 271(b).

59. On information and belief, T-Mobile takes active steps to induce infringement of one or more of at least claims 1, 4, 5, 7, and/or 10 of the '617 patent by others, including its customers, network users, and authorized resellers, and T-Mobile takes such active steps knowing that those steps will induce, encourage and facilitate direct infringement by others. Such active steps include, but are not limited to, encouraging, advertising (including by internet websites, television, store displays, print advertisements, etc.), promoting, and instructing others to use and/or on how to use the reliability and disaster tolerance capabilities of the Infringing Wireless Networks via its service plans, mobile devices, and/or SIM cards. Such service plans, mobile devices, and/or SIM cards including those made, sold, offered for sale, and/or imported by T-Mobile. Additionally, by example and without limitation, T-Mobile actively induces authorized resellers, including by instructing, promoting, encouraging, providing or selling promotional materials, for use in facilitating sales of its service plans, mobile devices, and/or SIM cards, that allow access to the Infringing Wireless networks, including but not limited to the reliability and disaster tolerance capabilities for the benefit of the respective users. Additionally,

specific examples of steps taken in furtherance of its active inducement by others are set forth above in Paragraphs 24-27, which are incorporated by reference.

60. On information and belief, T-Mobile knows or should know that such activities induce others to directly infringe one or more of at least claims 1, 4, 5, 7, and/or 10 of the '617 patent, including for example, by prompting them to use the mobile devices, service plans and/or SIM cards to access T-Mobile's Infringing Wireless Networks and to make use of the reliability and disaster tolerance features of T-Mobile's Infringing Wireless Networks.

61. On information and belief, T-Mobile contributes to the infringement of at least claims 1, 4, 5, 7, and/or 10 of the '617 patent by others, including its customers, network users, and authorized resellers. Acts by T-Mobile that contribute to the infringement of others include, but are not limited to, the sale, offer for sale, and/or import by T-Mobile of service plans, devices and/or SIM cards. Such service plans, mobile devices and/or SIM cards are especially adapted for use with and/or access to T-Mobile's Infringing Wireless Networks and are not suitable for substantial noninfringing use. On information and belief, T-Mobile knows such service plans, mobile devices and/or SIM cards to be especially adapted for use with its Infringing Wireless Networks, including but not limited to for use with the network's reliability and disaster tolerance capabilities and that such service plans, mobile devices and/or SIM cards are not suitable for substantial noninfringing use.

62. By way of at least this Complaint, T-Mobile knows of the '617 patent and performs acts that it knows, or should know, induce, and/or contribute to the direct infringement of at least claims 1, 4, 5, 7, and/or 10 of the '617 patent by third parties.

63. T-Mobile undertook and continues its infringing actions despite an objectively high likelihood that such activities infringed the '617 patent, which has been duly issued by the

USPTO, and is presumed valid. For example, since at least the filing of this action, T-Mobile has been aware of an objectively high likelihood that its actions constituted and continue to constitute infringement of the '617 patent, and that the '617 patent is valid. On information and belief, T-Mobile could not reasonably, subjectively believe that its actions do not constitute infringement of the '617 patent, nor could it reasonably, subjectively believe that the patent is invalid. Despite that knowledge and subjective belief, and the objectively high likelihood that its actions constitute infringement, T-Mobile has continued its infringing activities. As such, T-Mobile willfully infringes the '617 patent.

64. By its actions, T-Mobile has injured Huawei and is liable to Huawei for infringement of the '617 patent pursuant to 35 U.S.C. § 271.

**COUNT THREE: INFRINGEMENT OF  
U.S. PATENT NO. 8,867,339**

65. Huawei realleges and incorporates by reference Paragraphs 1-64 above, as if fully set forth herein.

66. The USPTO duly and properly issued the '339 patent, entitled "Method, System and Device for Recovering Invalid Downlink Data Tunnel Between Networks," on October 21, 2014. The '339 patent was duly assigned to Huawei, which is the assignee of all right, title, and interest in and to the '339 patent and possesses the exclusive right of recovery for past, present, and future infringement. Each and every claim of the '339 patent is valid and enforceable. A true and correct copy of the '339 patent is attached hereto as Exhibit 3.

67. On information and belief, T-Mobile uses Huawei's patented features to ensure the reliability of its Infringing Wireless Networks in violation of Huawei's patent rights. For example, T-Mobile specifically advertises it "maintain[s] three geo-redundant Network Operations Centers (NOCs) spread across the country that monitor [its] network 24 hours a day

to ensure a quick response to outages and emergency situations.” *See* <https://newsroom.t-mobile.com/news-t-mobile-takes-action-to-prepare-for-hurricane-irene.htm>.

68. In violation of 35 U.S.C. § 271, T-Mobile has infringed, contributed to the infringement of, and/or induced others to infringe one or more claims of the ’339 patent by, among other things, making, using, offering for sale, selling, and/or importing into the United States unlicensed systems, products, and/or services in a manner that infringes at least claims 1, 3-5, 7-9, 11-14, and/or 16 of the ’339 patent. Such unlicensed systems, products, and/or services include, by way of example and without limitation, T-Mobile’s Infringing Wireless Networks and/or the components thereof that enable recovery of a connection on its Infringing Wireless Networks. In addition, on information and belief, users of T-Mobile’s Infringing Wireless Networks infringe the ’339 patent by putting the claimed system into service by, for example, using the capabilities for recovery of a connection of those Infringing Wireless Networks.

69. For example, T-Mobile has directly infringed one or more claims of the ’339 patent by i) making, leasing, and/or using its wireless networks; ii) making, offering for sale, and/or selling its services; and iii) making, using, offering for sale, selling, and/or importing into the United States components (such as SGWs, MMEs, SGSNs, GGSNs, eNodeBs and RNCs etc.) in a manner that infringes at least claims 1, 3-5, 7-9, 11-14, and/or 16 of the ’339 patent and by using such components in its networks.

70. On information and belief, T-Mobile has infringed the ’339 patent by inducing others, including users of its infringing networks through subscription plans, mobile devices and/or SIM cards that it sells and/or offers, to infringe one or more claims of the ’339 patent in violation of 35 U.S.C. § 271(b).

71. On information and belief, T-Mobile takes active steps to induce infringement of one or more of at least claims 1, 3-5, 7-9, 11-14, and/or 16 of the '339 patent by others, including its customers, network users, and authorized resellers, and T-Mobile takes such active steps knowing that those steps will induce, encourage and facilitate direct infringement by others. Such active steps include, but are not limited to, encouraging, advertising (including by internet websites, television, store displays, print advertisements, etc.), promoting, and instructing others to use and/or how to use the capabilities for recovery of a connection of the Infringing Wireless Networks via its service plans, mobile devices, and/or SIM cards. Such service plans, mobile devices, and/or SIM cards including those made, sold, offered for sale, and/or imported by T-Mobile. Additionally, by example and without limitation, T-Mobile actively induces authorized resellers, including by instructing, promoting, encouraging, providing or selling promotional materials, for use in facilitating sales of its service plans, mobile devices, and/or SIM cards, that allow access to the Infringing Wireless networks, including but not limited to the capabilities for recovery of a connection of the networks for the benefit of the respective users. Additionally, specific examples of steps taken in furtherance of its active inducement by others are set forth above in Paragraphs 24-27, which are incorporated by reference.

72. On information and belief, T-Mobile knows or should know that such activities induce others to directly infringe one or more of at least claims 1, 3-5, 7-9, 11-14, and/or 16 of the '339 patent, including, for example, by prompting them to use the mobile devices, service plans, and/or SIM cards to access T-Mobile's Infringing Wireless Networks.

73. On information and belief, T-Mobile contributes to the infringement of at least claims 1, 3-5, 7-9, 11-14, and/or 16 the '339 patent by others, including its customers, network users, and authorized resellers. Acts by T-Mobile that contribute to the infringement of others



include, but are not limited to, the sale, offer for sale, and/or import by T-Mobile of mobile service plans, devices, and/or SIM cards enabled to use the recovery capabilities of the Infringing Wireless Networks. Such mobile service plans, devices, and/or SIM cards are especially adapted for use with and/or access to T-Mobile's Infringing Wireless Networks and are not suitable for substantial noninfringing use. On information and belief, T-Mobile knows such mobile service plans, devices, and/or SIM cards to be especially adapted for use with its Infringing Wireless Networks, including but not limited to for use with the network's capabilities for recovery of a connection and that such mobile service plans, devices, and/or SIM cards are not suitable for substantial noninfringing use.

74. By way of at least this Complaint, T-Mobile knows of the '339 patent and performs acts that it knows, or should know, induce, and/or contribute to the direct infringement of one or more at least claims 1, 3-5, 7-9, 11-14, and/or 16 of the '339 patent's claims by third parties.

75. T-Mobile undertook and continues its infringing actions despite an objectively high likelihood that such activities infringed the '339 patent, which has been duly issued by the USPTO, and is presumed valid. For example, since at least the filing of this action, T-Mobile has been aware of an objectively high likelihood that its actions constituted and continue to constitute infringement of the '339 patent, and that the '339 patent is valid. On information and belief, T-Mobile could not reasonably, subjectively believe that its actions do not constitute infringement of the '339 patent, nor could it reasonably, subjectively believe that the patent is invalid. Despite that knowledge and subjective belief, and the objectively high likelihood that its actions constitute infringement, T-Mobile has continued its infringing activities. As such, T-Mobile willfully infringes the '339 patent.

76. By its actions, T-Mobile has injured Huawei and is liable to Huawei for infringement of the '339 patent pursuant to 35 U.S.C. § 271.

**COUNT FOUR: INFRINGEMENT OF  
U.S. PATENT NO. 9,235,462**

77. Huawei realleges and incorporates by reference Paragraphs 1-76 above, as if fully set forth herein.

78. The USPTO duly and properly issued the '462 patent, entitled "Tunnel Management Method, Tunnel Management Apparatus, and Communications System," on January 12, 2016. The '462 patent was duly assigned to Huawei, which is the assignee of all right, title, and interest in and to the '462 patent and possesses the exclusive right of recovery for past, present, and future infringement. Each and every claim of the '462 patent is valid and enforceable. A true and correct copy of the '462 patent is attached hereto as Exhibit 4.

79. On information and belief, T-Mobile uses Huawei's patented features to ensure the reliability of its Infringing Wireless Networks in violation of Huawei's patent rights. For example, T-Mobile specifically advertises it "maintain[s] three geo-redundant Network Operations Centers (NOCs) spread across the country that monitor [its] network 24 hours a day to ensure a quick response to outages and emergency situations." *See* <https://newsroom.t-mobile.com/news-t-mobile-takes-action-to-prepare-for-hurricane-irene.htm>.

80. In violation of 35 U.S.C. § 271, T-Mobile has infringed, contributed to the infringement of, and/or induced others to infringe one or more claims of the '462 patent by, among other things, making, using, offering for sale, selling, and/or importing into the United States unlicensed systems, products, and/or services in a manner that infringes at least claims 14, 15, and/or 17-24 of the '462 patent. Such unlicensed systems, products, and/or services include, by way of example and without limitation, T-Mobile's Infringing Wireless Networks and/or the

components thereof that enable management of tunnel connections on its Infringing Wireless Networks. In addition, on information and belief, users of T-Mobile's Infringing Wireless Networks infringe the '462 patent by putting the claimed system into service by, for example, using the capabilities for management of tunnel connections of those Infringing Wireless Networks.

81. For example, T-Mobile has directly infringed one or more claims of the '462 patent by i) making, leasing, and/or using its wireless networks; ii) making, offering for sale, and/or selling its services; and iii) making, using, offering for sale, selling, and/or importing into the United States components (such as SGWs, MMEs, and PDN-GWs etc.) in a manner that infringes at least claims 14, 15, and/or 17-24 of the '462 patent and by using such components in its networks.

82. On information and belief, T-Mobile has infringed the '462 patent by inducing others, including users of its infringing networks through subscription plans, mobile devices and/or SIM cards that it sells and/or offers, to infringe one or more claims of the '462 patent in violation of 35 U.S.C. § 271(b).

83. On information and belief, T-Mobile takes active steps to induce infringement of one or more of at least claims 14, 15, and/or 17-24 of the '462 patent by others, including its customers, network users, and authorized resellers, and T-Mobile takes such active steps knowing that those steps will induce, encourage and facilitate direct infringement by others. Such active steps include, but are not limited to, encouraging, advertising (including by internet websites, television, store displays, print advertisements, etc.), promoting, and instructing others to use and/or how to use the capabilities for tunnel management of the Infringing Wireless Networks via its service plans, mobile devices, and/or SIM cards. Such service plans, mobile

devices, and/or SIM cards including those made, sold, offered for sale, and/or imported by T-Mobile. Additionally, by example and without limitation, T-Mobile actively induces authorized resellers, including by instructing, promoting, encouraging, providing or selling promotional materials, for use in facilitating sales of its service plans, mobile devices, and/or SIM cards, that allow access to the Infringing Wireless networks, including but not limited to the capabilities for tunnel management of the networks for the benefit of the respective users. Additionally, specific examples of steps taken in furtherance of its active inducement by others are set forth above in Paragraphs 24-27, which are incorporated by reference.

84. On information and belief, T-Mobile knows or should know that such activities induce others to directly infringe one or more of at least claims 14, 15, and/or 17-24 of the '462 patent, including, for example, by prompting them to use the mobile devices, service plans, and/or SIM cards to access T-Mobile's Infringing Wireless Networks.

85. On information and belief, T-Mobile contributes to the infringement of at least claims 14, 15, and/or 17-24 the '462 patent by others, including its customers, network users, and authorized resellers. Acts by T-Mobile that contribute to the infringement of others include, but are not limited to, the sale, offer for sale, and/or import by T-Mobile of mobile service plans, devices, and/or SIM cards enabled to use the tunnel management techniques of the Infringing Wireless Networks. Such mobile service plans, devices, and/or SIM cards are especially adapted for use with and/or access to T-Mobile's Infringing Wireless Networks and are not suitable for substantial noninfringing use. On information and belief, T-Mobile knows such mobile service plans, devices, and/or SIM cards to be especially adapted for use with its Infringing Wireless Networks, including but not limited to for use with the network's tunnel management techniques

and that such mobile service plans, devices, and/or SIM cards are not suitable for substantial noninfringing use.

86. By way of at least this Complaint, T-Mobile knows of the '462 patent and performs acts that it knows, or should know, induce, and/or contribute to the direct infringement of one or more at least claims 14, 15, and/or 17-24 of the '462 patent's claims by third parties.

87. T-Mobile undertook and continues its infringing actions despite an objectively high likelihood that such activities infringed the '462 patent, which has been duly issued by the USPTO, and is presumed valid. For example, since at least the filing of this action, T-Mobile has been aware of an objectively high likelihood that its actions constituted and continue to constitute infringement of the '462 patent, and that the '462 patent is valid. On information and belief, T-Mobile could not reasonably, subjectively believe that its actions do not constitute infringement of the '462 patent, nor could it reasonably, subjectively believe that the patent is invalid. Despite that knowledge and subjective belief, and the objectively high likelihood that its actions constitute infringement, T-Mobile has continued its infringing activities. As such, T-Mobile willfully infringes the '462 patent.

88. By its actions, T-Mobile has injured Huawei and is liable to Huawei for infringement of the '462 patent pursuant to 35 U.S.C. § 271.

#### **DEMAND FOR JURY TRIAL**

89. Huawei hereby demands trial by jury on all claims and issues so triable.

#### **PRAYER FOR RELIEF**

90. Wherefore, Huawei respectfully requests that this Court enter judgment against T-Mobile as follows:

A. That each of the Asserted Patents has been infringed by T-Mobile;

- B. That T-Mobile's infringement of the Asserted Patents has been willful;
- C. An award of damages adequate to compensate Huawei for the patent infringement that has occurred, together with pre-judgment interest and costs;
- D. Permanently enjoin T-Mobile from further infringement or alternatively, award an ongoing royalty for T-Mobile's post-verdict infringement, payable on each product or service offered by T-Mobile that is found to infringe one or more of the patents asserted herein, and on all future products and services that are not colorably different from those found to infringe;
- E. An award of all other damages permitted by 35 U.S.C. § 284, including increased damages up to three times the amount of compensatory damages found;
- F. A finding that this is an exceptional case and an award to Huawei of its costs and reasonable attorneys' fees incurred in this action as provided by 35 U.S.C. § 285; and
- G. Such other relief, including other monetary and equitable relief, as this Court deems just and proper.

Dated: January 15, 2015

Respectfully submitted,

By: /s/ Jane Du

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